

EHS SOFTWARE

Full Line Product Descriptions of all
our Software and Hardware for
*** PET, APPLE, ATARI, SYM, KIM ***

PET Stuff

ATARI Stuff

APPLE Stuff

SYM Stuff

KIM Stuff

INTERTEC, ZENITH, C. ITOH and other Stuff

ORDERING INFORMATION:

Send check or money order in US dollars, Master or Visa Card.
For foreign air mail of software, enclose additional \$12.00.
(Air Mail of Tiny-C manual, enclose \$20.00 because of extra weight.)
A blank order sheet is enclosed in this catalog.

NOTE :

EHS is a software house that is run and operated by J.R. Hall, C.W. Moser, and D.F. Earnhardt. We are in the process of accumulating a collection of quality products for sale to the 6502 microcomputer market. If you have quality software that you have developed and would like to have marketed on a Royalty basis, please write describing your product.

EASTERN HOUSE SOFTWARE

3239 Linda Dr.

Winston-Salem, N.C. 27106

(919) 924-2889 or 748-8446

THE PET RABBIT

WOULD YOU AND YOUR PET RATHER BE A SLOW TORTISE OR A FAST RABBIT?

◁◁ In ROM or on Cassette ▷▷

The PET RABBIT is a programmers aid which provides 12 additional commands that can be executed in BASIC's direct mode. In addition to the commands, automatic repeat of any key held down for 0.5 seconds is also provided. This will greatly aid inputting of characters and provide more convenient cursor control. Most importantly, the RABBIT's high speed recording technique allows an 8K program to be saved in 38 seconds instead of the normal 2 minutes 44 seconds in Commodore format. (Note- The RABBIT cannot be used to store data tapes from BASIC.)

The PET RABBIT is 2K of machine code supplied on cassette or in a ROM integrated circuit. The cassette version occupies the top most portion of memory and can be ordered in one of 5 locations: \$1800-\$1FFF for 8K PETs; \$3000-\$37FF or \$3800-\$3FFF for 16K PETs; and \$7000-\$77FF or \$7800-\$7FFF for 32K PETs. The reason for two different versions for the 16K and 32K is to provide room for those programmers who use the DOS Support (wedge) program. The cassette RABBIT works with 3.0 ROM PETs.

The ROM version is a 24 pin IC which plugs into a spare socket on the printed circuit board. Since the ROM version does not occupy user RAM, it will work with any 3.0 or 4.0 ROM PET. The main advantage of the ROM version is that it does not have to be loaded each time you power up your PET and it does not occupy valuable RAM memory.

The PET RABBITs high-speed cassette recording feature will not work with some of Commodore's older cassette decks. To be specific, cassette decks with the lift top lid (termed old style) will not work but all other features will work. In addition, some new style cassette decks will not work. How do you know if your cassette will work? Simple-- open up the cassette deck and look at the printed circuit board components. If there are IC packages for all the active components, it will work with the RABBIT. If there are any transistors on the board, it will not work. Most new style cassette decks will work okay since there are very few of the transistor types. If you wish to purchase the ROM RABBIT and a cassette deck, we can offer an attractive discount.

A summary of the RABBIT commands are as follows:

- 1) AUTO REPEAT of any key held down for more than 1/2 second. This ----- provides easy and convenient cursor movement and multiple character input.
- 2) RAM Memory Test, Convert decimal # to hex and vice versa, and toggle character set from graphics to upper/lower case.

12 RABBIT COMMANDS

SS - Save with short leader	D - Convert decimal # to hex #
SL - Save with long leader	H - Convert hex # to decimal #
L - Load a program	Z - Toggle character set
V - Verify a program	K - Kill the Rabbit
E - Load and then run	* - Go to monitor
T - RAM Memory Test	G - Go to Machine Language Program

Example: L "STAR TREK",2 or T 1,400,1FFF

Since the RABBIT is an extension of the operating system, the normal PET load, save, and verify commands can still be used. Also, the RABBIT can be used with the BASIC PROGRAMMERS TOOLKIT.

ROM version occupies address \$A000 for 3.0 ROMs and address \$9000 for 4.0 or 8032 ROMs. Please specify 3.0 or 4.0 when ordering.

MANUAL AND ROM = \$49.95
 MANUAL AND CASSETTE = \$29.95

Tiny-C for 32K PET and Disk

C is a programming language designed by Dennis Ritchie at Bell Telephone Laboratories. C is a versatile and expressive general-purpose programming language which offers economy of expression, modern control and data structures, and a rich set of operators.

Tiny-C, a subset of C, was designed by Tom Gibson and Scott Guthry. Tiny-C for PET was implemented by EHS for use by those who want to study a modern structured programming language on a CBM computer.

Tiny-C for PET includes:

- Enhanced DOS which provides 6 additional Tiny-C oriented commands.
- Tiny-C interpreter, program editor, and library
- Drives IEEE printer
- Auto-repeat key function
- Installation manual describing how Tiny-C was adapted for the PET

Tiny-C Owners Manual is contained in a large ring binder and is required in order to understand and program in Tiny-C. This manual contains a tutorial and program walk-through so one can quickly understand the Tiny-C language. This manual also contains chapters on the theory of operation of the Tiny-C interpreter.

PET Tiny-C diskette for 3.0 Roms and installation manual = \$50.00
 Tiny-C Owners Manual = \$50.00 (Add \$20.00 for Air Mail shipping)

6502 MACRO ASSEMBLER AND TEXT EDITOR

FOR PET, APPLE, ATARI, SYM, KIM

\$49.95

The only cassette-based assembler that was adapted for all the major 6502 microcomputers. Thus you can be sure that you have a "compatible" software package.

NOTE: ASM/TED is upward compatible with our MAE assembler.

See Review in Compute, Call Apple, Pet Gazette, and The Paper!

GENERAL

- Versions currently available for PET, APPLE II, ATARI, and SYM on respective compatible tapes. A KIM version is provided in a special high-speed cassette recording format (high-speed load/save routines included).
- Written entirely in Machine Language - Not in Basic like some we know of. Thus you get very fast and accurate assemblies.
- 36 Error Codes, 26 Commands, 22 Pseudo Ops.
- Macro and Conditional Assembly Capability.
- Apple II version works with Apple II or Plus, DOS or Cassette-based systems.
- Occupies 8K of memory starting at \$2000. Apple version with disk patches occupies just over 9K.
- Each copy is assigned a special serial number. If a major problem is ever encountered, an update will be issued.

TEXT EDITOR FEATURES

- Auto line numbering for easy source entry.
- String search command (>FIND)
- String search and replace command (>EDIT).
- Commands to copy or move one or more lines (>COPY, >MOVE).
- Renumber source file command (NUMBER).
- Command to delete one or more lines (>DELETE).
- Load and record commands (>GET, >PUT).
- Source files can also be appended to current file (>GET APPEND).
- Each source file loaded results in a status summary consisting of length in bytes plus the address range where loaded.

ASSEMBLER FEATURES

- Labels unique up to 10 characters. Labels may be made up of the following: A-Z 0-9 Plus 12 other characters.
- Label expressions may be entered. Ex: LDA TABLE-INDEX+1

- Hex, decimal, binary constants, and ASCII strings may be stored.
Ex: .BY 'THIS IS A TEXT STRING ENCLOSED IN QUOTES'
.BY %1101 %F3 49 'ABC' MASKBYTE
- Can specify hi or lo part of label.
Ex: LDA #H.OP.TABLE ;LOAD HI PART OF OP.TABLE
LDA #L.VALUE ;LOAD LO PART OF VALUE
- Free format input. Simply separate fields with one or more spaces and the fields will be automatically tabulated.
- Conditional Assembly and Macro capability.
- Macros can be nested.
- Non-repeating label capability for Macros.
- Conditional Assembly can be incorporated within MACROS.
- Assembler can store object code in memory at a different address from its execution address if desired.
- Complete listing can be generated during assembly (>ASSM LIST) or an errors only listing can be generated.
- Command to output only the Symbol Table.

OPERATING FEATURES

- Commands may be abbreviated to first 2 characters.
- Commands, pseudo ops, and conditionals may be entered as upper or lower case characters.
- Except for PET version (Because PET uses these for Graphics), most control codes are displayed as c where c is the character that would be displayed if hex 40 was added to the code.
Ex: Control C = C , control X = X , etc.
- Machine Language programs can be executed via >RUN command.
Ex: >RUN MEMTEST , >RUN \$8C0 , >RUN 4096
- User command for user created functions (>USER)
- Upper and lower memory boundaries for Text Buffer and Symbol Table assume a default size on cold entry, but can be changed or displayed via >SET command.

COMMAND SUMMARY *

AUTO	RUN	USER	ASSEMBLE
GET	LABELS	ENTER	SET
PUT	PASS	LOOKUP	CLEAR
DELETE	CLEAR	MANUSCRIPT	>n
HARD	COPY	BREAK	
PRINT	MOVE	EDIT	
NUMBER	FORMAT	FIND	

* Additional commands not listed are provided for each implementation that are not available for all versions.

PSEUDO OP SUMMARY

.BA .OC .MD .SI .CT .MC .ME .DE

```
.CE .SE .ES .DI .LS .RC .EC .EN
.LC .EJ .DS .OS .RS .BY
```

----- CONDITIONAL ASSEMBLY OPERATOR SUMMARY -----

```
IFE IFN IFP IFM SET ***
```

----- SOME SIMPLE MACRO EXAMPLES -----

```
;INCREMENT DOUBLE BYTE LOCATION VIA INCD MNEMONIC
!!!INCD. .MD (LOC) ;MACRO DEFINITION PSEUDO OP
          INC LOC
          BNE ...SKIP ;...label IS NON-REPEATING TYPE
          INC LOC+1
...SKIP .ME ;MACRO END DEFINITION
```

```
;IMPLEMENT SWEET16 MNEMONIC SET.
!!!SET. .MD (REG CONSTANT) ;SET REG. TO A CONSTANT
         .BY REG+$10 ;FORM MNEMONIC
         .SE CONSTANT ;FORM CONSTANT (2 BYTES)
         .ME
```

```
;SAVE REGISTERS VIA SAVEREG MENONIC IMPLEMENTATION
!!!SAVEREG .MD
           PHP ;SAVE PSR
           PHA ;SAVE R(A)
           TXA ;SAVE R(X)
           PHA ; *
           TYA ;SAVE R(Y)
           PHA ; *
           .ME
```

----- ATARI INFORMATION -----

The ASSM/TED for ATARI occupies 9K of memory and includes a machine language monitor for de-bugging your programs. ASSM/TED comes on cassette or on diskette for use with the 810 disk (specify when ordering). Works with ATARI BASIC. The diskette version is exactly like the cassette version except that it is booted from disk at the same time the DOS is loaded. Therefore, it is more convenient to use than the cassette version. The diskette version (as with the cassette version) only supports the loading and saving of source files through the the cassette recorder. ASSM/TED requires at least 40K of memory.

Cassette version - \$49.95 Diskette version - \$53.95

GRAPHICS DRAWING COMPILER

\$29.95 on cassette (for ASSM/TED)

\$34.95 on diskette (for MAE)

Requires: The Eastern House Software PET or SYM Macro ASSM/TED. The SYM version is designed to work with the Synertek KTM 2/40 or KTM 2/80 CRT interface, but one could easily modify the Macro package for other CRT terminals. We recommend 24K RAM memory in order to effectively use this compiler.

MUSIC AND SOUND COMPOSER

\$29.95 on cassette (for ASSM/TED)

\$34.95 on diskette (for MAE)

Requires: The Eastern House Software PET Macro ASSM/TED. We recommend 20K RAM memory in order to effectively use this compiler.

The Graphics Drawing Compiler (GDC) and Music and Sound Composer (MSC) Compiler are composed of a number of macros which emulate a high-level graphics or music language. In addition to the macros, they provide some very useful enhancements to the ASSM/TED.

For those who are not familiar with the term, a compiler is a program which translates statements written in a high-level language into a sequence of machine instructions. Since these compilers generate pure machine code, no runtime package is required. In fact, after you have successfully compiled a program, it can be executed without the ASSM/TED and the compiler.

The main purpose of this work is to illustrate by example the anatomy of an easy to understand compiler, and to provide a mechanism whereby the reader could easily develop his own compiler - be it an industrial control compiler, music compiler, or just a collection of macros which aid in program development.

Whether you intend to use this information for graphics drawing or for some other macro implementation, the ideas presented apply to practically all applications. Macros can represent a high-level interface between the programmer and assembly language, making the source listing easier to read. Thus, coding should be easier for the programmer resulting in programs which are more reliable and less expensive to produce.

GDC or MSC provide the following:

A. ASSM/TED Enhancements:

For both SYM and PET: >BUILD command which provides ability
----- to build into ASSM/TED a library of
symbols or set of macros which define a compiler.

For the PET: Provides for >FORMAT command to set the maximum
 ----- label length (max. = 31 characters/label), and
 preservation of zero page so Basic and ASSM/TED can coexist.

B. GDC Command Summary :

ADD, BEGIN, BELL, CLEAR, DO, DEFINE, DRAWU, DRAWD, DRAWL, DRAWR,
 END, GRAPHY, GRAPHN, HOME, INPUTB, INPUTC, JUMP, JUMPE, JUMPG,
 JUMPE, JUMPL, JUMPLE, JUMPN, OUTPUTB, OUTPUTC, POSABS, POSREL,
 PRINT, REVRSN, REVRSY, SUB, VECTOR, VECTUL, VECTLR, VECTLL

C. MSC Command Summary :

- 1) Tempo from 60 to 130 beats per minute.
- 2) Four octaves of notes (including sharps and flats).
- 3) And these commands: ADD, BEGIN, BYTE, CLRSND, DO, END,
 FREE, JUMPE, JUMPG, JUMPL, JUMPN, SETx, SHRATE,
 SUB, WAIT.

SPECIAL: Buy both GDC and MSC and deduct 10% of cost.

TRAP 65

PRICE REDUCED TO \$69.95

TRAP 65 is a circuit intended for use by machine language programmers to prevent execution of unimplemented 6502 opcodes. Since unimplemented opcodes will cause unpredictable 6502 operation and/or cause the system to crash, it would be desirable to prevent the 6502 from executing these opcodes. TRAP 65 is a circuit that will perform this function. Whenever TRAP 65 detects an unimplemented opcode, it will force an entry to your monitor and display the address+1 of the unimplemented opcode. The programmer can then easily correct the error without having to spend hours searching for the cause of the crash.

TRAP 65 can also be used to extend the 6502 instruction set on PETs, SYMs, and KIMs. You can do this by placing an address at the IRQ vector which points to a routine which executes code you assign to the unimplemented opcode. Imagine these: PHX, PHY, JMP (TABLE,X), one byte calls, 16 bit opcodes, etc.!!!

The TRAP 65 circuitry is mounted on a 4 3/4 x 3 1/2 inch Printed Circuit Board. Fully assembled and tested. Installs in seconds. Works with PET, Apple II, KIM, SYM, OSI, and AIM. Does not work with ATARI.

MAE - Macro Assembler/Text Editor

See Review in Compute and Kilobaud!

The only disk assembler that was adapted for all the major 6502 microcomputers. Thus you can be assured that you have a "compatible" software package. MAE is a machine language development aid for the following computers:

Commodore:

2001-32K (3.0 Roms) and 2040, 4040, 8050 disk, or CGRS PEDISK II.
 4001-32K (4.0 Roms) and 2040, 4040, 8050 disk, or CGRS PEDISK II.
 (Also 2001 with upgrade 4.0 Roms)
 8032 and 2040, 4040, 8050 disk, or CGRS PEDISK II.

Apple II:

48K Apple II or Plus and Disk II (DOS 3.2 or 3.3).

Atari:

32K Atari and Atari 810 Disk.

NOTE: Please specify computer and disk drive when ordering.

MAE contains the most powerful 6502 assembler and text editor currently on the market. If you are looking for a professional development tool that can greatly increase the productivity of your programming staff, then MAE may be the answer. Check these features:

GENERAL

- MAE was written entirely in machine language - not in Basic like some assemblers we know of. Thus you get very fast and accurate assemblies.
- PET version coexists with Basic.
- 38 error codes, 27 commands, 26 pseudo ops, and 5 conditional assembly operators.
- Has built in software UART (110 - 9600 baud) which can drive an external device (PET and APPLE versions only).
- All commands oriented for disk operation.
- Macro, Conditional Assembly, and Interactive Assembly capability.
- Optionally creates executable object code in memory or relocatable object code on disk.

TEXT EDITOR FEATURES

- Auto line numbering for easy source entry.
- String search command (JFIND).
- String search and replace command (JEDIT).
- String search and conditionally replace by stepping thru file and prompting user for determination of replacement (JEDIT *).

- Commands to copy and move one or more source lines (JCOPY, JMOVE)
- Renumber source file command (JNUMBER).
- Command to delete one or more lines (JDELETE).
- Load and record commands (JGET, JPUT).
- Source files can also be appended to current file (JGET APPEND).
- Each source file loaded results in a status summary consisting of length in bytes plus the address range where loaded.
- Word Processor file included which adds capability to Right and Left Justify, center phrases, set margins, define text body shapes, titles, footers, link named disk files together, plus other text processing features.

ASSEMBLER FEATURES

- Labels unique up to 31 characters. User specifies maximum label length via JFORMAT command.
- Label expressions may be entered. EX: LDA TABLE-INEDX+1
- Hex, decimal, binary constants, and ascii strings may be stored.
EX: .BY 'THIS IS A TEXT STRING'
.BY %1101 %F3 49 'ABC' MASKBYTE
- Can specify hi or lo part of label.
EX: LDA #H.OP.TABLE ;LOAD HI PART OF OP.TABLE
LDA #L.VALUE ;LOAD LO PART OF VALUE
- Free format input. Simply separate fields with one or more spaces and the fields will be automatically tabulated.
- Conditional Assembly operators: IFE, IFN, IFP, IFM, SET.
- Macro capability via .MD pseudo op (Macro Definition).
- Non-repeating label capability for macros.
- Macros can be nested.
- Both passes of assembly are accomplished automatically.
- Conditional Assembly can be incorporated within macros.
- Capability to store executable object code in memory and/or output relocatable object to disk during assembly.
- Assembler can store object code in memory at a different address from its execution address if desired (via .MC pseudo op). This is useful if object is to execute in memory space occupied by MAE.
- Can assemble source from memory or, for long programs, multiple source files from disk as follows:
.FI "MODULE1"
.FI "MODULE2"
.FI "MODULE3"
- Complete listing can be generated during assembly (JASSM LIST) or an errors only listing can be generated. Three ways to generate an errors only assembly:
via JASSM NOLIST command
via .LC pseudo op
via DEL or control O key during output
- Interactive Assembly feature which provides for assembler to output messages and accept input during assembly process.
EX: INPUT BEGIN ASSEMBLY ADDRESS
? 1000
- Command to output the entire symbol table or just certain types of symbols.

- Sorted symbol table.

SIMPLIFIED TEXT PROCESSOR FEATURES

- Single/double/triple/etc. spacing, left and right justification, raised right/left margins, centering, margin control, headers, footers, printing of text in shapes, text files may be linked so that document size is limited only by the amount of disk capacity.
- STP text macros include: .LINK, .VSPACE, .Sn, .M, .NOFILL, .FF, .JU, .RR, .RL, .Ln, .C, .SWAP, .P, .T, .FOOT, .SET, and .SHAPE.

OPERATING FEATURES

- Commands may be abbreviated to first 2 characters.
- Commands, pseudo ops, and conditionals may be entered as upper or lower case characters.
- Machine language programs can be executed via JRUN command.
- User command for user created functions (JUSER).
- Upper and lower boundaries for text file and symbol table assume a default size on cold entry, but can be changed or displayed via JSET command.

RELOCATING LOADER FEATURES

- Separate program from Assembler/Text Editor but is included in MAE package.
- Provides capability to quickly relocate the ASSM generated relocatable object code files in 3 separate segments:
 - 1) Program Body
 - 2) Absolute Variables
 - 3) Zero Page Variables
- One can also relocate but store the executable code at a different address.
- Included in the MAE package is an executable copy of the relocating loader. A relocatable copy of the relocating loader is also provided in the PET and APPLE versions.

MATERIAL SUPPLIED

- MANUAL = 50+ page manual with description of all commands and pseudo ops, many examples, and an example software listing of a program which illustrates the assembler format.
- DISKETTE = 5 1/4" compatible floppy diskette containing not only the MAE software but also several other useful program files.

NOTE :

COMPLETION OF ATTACHED LICENSE AGREEMENT MUST ACCOMPANY ORDER. MAE Diskette containing the Macro Assembler/Text Editor, STP Word Processor, Relocating Loader, plus other files not described here, with full documentation - \$169.95.

PET SOFTWARE

Supersort/Superbase by James Strasma

Supersort/Superbase consists of the following 2 programs:

- 1) A machine language Shell-Metzer general purpose sorting program that sorts a Basic programs string and integer arrays at lightning speed.
- 2) A sequential file manager (Superbase) that uses Supersort for sorting. Use Superbase for mail lists and other file management needs. Commands to add and change data, print to screen or printer, sort on a specified item, etc. \$35.00 (Disk only) includes documentation.

Games sold by EHS

- Space Invasion - By Richard Mansfield, for 8032 PET. Action-packed shoot-em-down game. Action like Space Invaders but different. Rare category of program as there are few games for 8032. \$17.95 on diskette.
- Muon Invasion - By Richard Mansfield, for 2001 series PET. Muon warships have just entered the Milky Way. Its up to you to blast them with your gravitation beams. \$9.95
- Hidden Words - By Richard Mansfield, for any PET. Two player word game in which the winner is the player who identifies the greater number of words in the time allowed. \$9.95
- UFO Search - By Betsy Robinson, for any 40-column PET. From constellation Cassiopeia and the Big Dipper to Scorpius and Perseus, this program displays graphical representation of one or more constellations. You guess if there is a UFO in the STARS. Its you (Earth) against outer space. \$9.95
- Speedy Biorhythm - By Betsy Robinson, for any 40 column PET. Plots biorhythm on PET's screen. \$9.95

NOTE: Except for Space Invasion, all prices are for shipment on cassette. Add additional \$3.00 if you want games shipped on diskette.

6800 and 8085 Cross Assemblers

EHS has 6800 and 8080/8085 Cross-Assemblers available for the PET, Atari, and Apple computers. A Cross-Assembler is an assembler program that functions on a certain processor but assembles code for a different processor. For example, EHS's MAE6800 Cross-Assembler is an assembler/text editor that functions on a 6502-based PET but it generates machine code for the 6800. You still write your program in 6800 Assembly Language and the generated object code must be down-loaded to a 6800-based system for execution. A good use is in a University or company that already has a PET and must develop a program for say a 6800 based controller. If you've already got a PET, it sure beats having to shell out another \$10,000+ for a 6800 Motorola Development System. A Commodore computer, MAE6800, and the K-Z EPROM Programmer makes a nice 6800 Development System. Price = \$500.00.

APPLE MAIL LIST SYSTEM

Sorts on zip code or last name. Prints mailing labels.
Approximately 1000 names/diskette.
Requires 48K Apple, disk, Applesoft in ROM, DOS 3.2 or 3.3
(please specify). Diskette and manual. REDUCED to \$19.95.

EPR0M PROGRAMMER FOR PET AND ATARI

Program 2716, 2516, and 2532 EPROMS using the BRANDING IRON connected to your computer. Housed in an attractive box. Software included.
Any PET = \$75.00. ATARI = \$119.95 (includes machine language monitor).

8032 CBM TERMINAL SOFTWARE

When this catalog was being prepared, we were just about finished with our super terminal software for the 8032 CBM computer. Write for price. Includes RS232 Hardware Interface.

- Constantly displays time in status line.
- 300 Baud full or half duplex or local mode.
- Download or Upload to/from disk (4040 or 8050).
(We've actually used this software to log into a DEC 10 Mainframe and copy some basic games to the PET and run them.)
- Drives printer and disk, uses inexpensive RS232 modem. No need to buy Commodore's expensive IEEE modem.
- Status line displays various information with critical indicators in blinking format.
- Automatically tokenizes or untokenizes PET Basic programs that are downloaded or uploaded.

ATARI SOFTWARE

MACHINE LANGUAGE MONITOR FOR ATARI

The Machine Language Monitor for ATARI provides 21 commands which allows the user the ability to interact with the 6502 microprocessor. It is compatible with ATARI BASIC and (once loaded) is ready for your use at anytime. The monitor comes on cassette or on diskette for the ATARI 810 disk (the cassette version cannot be saved on disk).

The monitor is independent of the amount of system memory and BASIC. Thus, it can function with with varying amounts of memory. It can even function with no BASIC and 48K of memory. The monitor uses ATARI's powerful screen editing capability. This makes the monitor easy to use.

Some of the monitor commands are:

Display Memory	Display Resistors
Alter Memory	Alter Registers
Fill Memory	Compare Memory
Transfer Memory	Hex To Decimal
Decimal To Hex	Save Memory To Cassette
Load Cassette To Memory	Change Memory
Goto Memory	Hunt Memory For Hex
Hunt Memory For ASCII	Calculate Branch
Send Data To Printer	Send Data To Screen
and Disassemble Memory	

Cassette version -- \$24.95
Requires at least 8K memory.

Diskette version -- \$29.95
Requires at least 16K memory.

MEMORY TEST FOR ATARI

When you purchase a new ATARI or add on new RAM modules, you need to be sure that the memory is working properly. Remember, you only have a short guarantee on your memory. Memory Test performs the most extensive memory check available. Prints to screen each memory location found bad. Requires 8K of memory.

Cassette and Manual -- \$6.95

TYPING EXERCISE FOR ATARI

Typing Exercise is a great educational program for those who wish to improve their typing skills. Typing Exercise consists of two programs. TYPING 1 contains 13 typing drills; 9 drills progress thru alphabet and 4 thru numerics. TYPING 2 is a timed typing test. Time and words per minute are calculated for you. Both exercises show errors in inverse video. Requires 16k of memory.

810 Diskette -- \$12.95

THE MONKEY WRENCH (tm)

The Monkey Wrench is a ROM cartridge which extends the operating capability of the ATARI 800 computer. When installed into the ATARI, the Monkey Wrench provides 9 new direct mode BASIC commands. The commands are:

- Auto Line Numbering - Provides new line numbers when entering BASIC program lines.
- Delete Line Numbers - Removes a range BASIC line numbers.
- Change Margins - Provides the capability to easily change the screen margins.
- Memory Test - Provides the capability to test RAM memory.
- Renumber - Renumbers BASIC's line numbers including internal references.
- Cursor Exchange - Allows usage of the cursor keys without holding down the CTRL key.
- Hex Conversion - Converts a hexadecimal number to a decimal number.
- Decimal Conversion - Converts a decimal number to a hexadecimal number.
- Monitor - Enter the machine language monitor.

In addition to the BASIC commands, the Monkey Wrench also contains a machine language monitor with 15 commands used to interact with the powerful features of the 6502 microprocessor.

Price - \$49.95

EPR0M Board

The EPROM Board is a specially designed printed circuit board for use in the cartridge slot of an ATARI computer. The intent of the EPROM cartridge is to allow the user the capability to easily install his or her own EPROM software programs for controlling the ATARI system. The EPROM Board has the ability to contain up to 8K bytes of EPROM memory. The board is setup to use 2716 or 2532 type EPROMs but can use other types of EPROMs. We sell EPROMs for the EPROM Board - see following page.

Price - \$19.95

(Note: See Page 13 for information on the BRANDING IRON 2716/2532 EPROM Programmer.

◇◇◇◇ Other Hardware that we sell!!! ◇◇◇◇

INTERTEC	List	Our Price
Superbrain 64K - 350K Floppy Storage	\$3495	\$2995
" QD 64K - 700K " "	\$3995	\$3495
Superfive I - 350K Floppy and 5MB Hard	\$6995	\$5395

Zenith	List	Our Price
Z-89-GA 48K, no floppy drives	\$2595	\$2225
Z-89-FA 48K, one floppy drive	\$2895	\$2450
Z-87-Dual 5 1/4" Floppy (200K)	\$1195	\$1050
Z-47-DA-Dual 8" Floppy (2.5 MB)	\$3695	\$2950

NOTE: We have an extensive list of software for the INTERTEC that we sell at discounted prices.

Other Hardware

. ZENITH Green Screen Monitor for Apple	\$129.95
. Zenith Z19 Terminal	\$795.00
. Starwriter printer with tractors 25 cps	CBM = \$1690.00
. APPLE Parallel = \$1645.00, APPLE RS232 = \$1700	
. Universal Data System Modem direct connect	
300 baud DRG/RMS = \$169.95, with auto answer = \$199.00,	
1200 baud = \$259.00	
. C. Itoh Comet I dot matrix w/IEEE or Apple Interface	\$429.95
. C. Itoh Comet II (parallel) = \$829.95, (serial) = \$895.00	
. Tymac Parallel Interface for Apple	\$119.95
. Hayden Applesoft Compiler	\$179.95
. C. Itoh Prowriter parallel interface (list=\$595)	\$519.95
. C. Itoh Prowriter serial interface (list=\$645)	\$559.95
. Wordsworth 48K (Zenith Z-89 FA, CFM, Wordstar wordprocessor, Starwriter letter quality printer. List = \$4995.)	\$4650.00
. Wordsworth 64K (same as above but with 64K RAM. List = \$5135.)	\$4774.00
. Wordsworth 64K-2 (same as above but includes Z-89-GA and Z-87. List = \$5500.)	\$5115.00
. Wordsworth 64K-3 (same as above but includes Z-89-FA and Z-87. List = \$5995.)	\$5575.00
. MPC 16K Memory Board for Apple (List = \$149.50)	\$120.00
. Apple upper and lower case ROM	\$24.95
. Printer interface cables also available for Radio Shack, Apple, IEEE, etc.	(Call for Price)
EPROMS 2716 +5V, 450ns = \$6.50	DISKETTES 5 1/4 inch for PET
===== 2532 +5V, 450ns = \$12.50	===== APPLE, ATARI, etc.
	Box of 10 = \$22.50
RIBBONS Ribbon Cartridges for Starwriter, Diablo, etc.	
===== Mylar = \$5.00 or Cloth = \$6.00	

Dear PET and VIC Owners:

For \$6.00 and a small favor, we would like to sell you a copy of a very neat CURSOR SCROLLING PROGRAM that we have developed.

First let me describe the cursor scrolling program. This program provides the capability to scroll forward and backward thru a BASIC program using the cursor up (CU) and cursor down (CD) keys. For example, cursor to the top of the screen, press cursor up and the screen will "reverse scroll" with the top line displaying the previous BASIC line. Auto-repeat is enabled on all keys and you can simply hold down the CU key to continuously scroll backwards thru the file until you remove your finger from the key or you reach the start of your program. Similarly, you can cursor to the bottom of the screen and scroll forward thru your BASIC program until the end. As you can see, the scroll program makes browsing through and locating those bugs a breeze.

Now you're wanting to know "what is the small favor?" - Right? The small favor we're wanting is some free advertising and you can help. Did you know that a full-page advertisement in BYTE magazine costs several thousand dollars - and that is just for one appearance? Kilobaud, Creative Computing, Compute, and Micro are not as high but are still significant costs. How can anyone sell inexpensively priced software with such high advertising costs? Now don't get us wrong, advertising in magazines is useful and has its place. You'll note that Eastern House advertises a lot. But advertising is by far our greatest expense. So, we're trying an experiment and, with your help, maybe we can change the way software is sold. If we can reach the PET community at minimal cost, the savings can be passed on to you. This technique just may be the solution to software piracy - that is, who would want to steal from some poor programmer at this small price! Thanks for your time and lets all work together - Carl Moser, EHS.

To order the cursor scroll program:

- 1-) Make 5 copies (or more) of this letter.
- 2-) Send all but one copy to other PET owners (free advertising) who might like to purchase this program. Examples: Friends, computer club members, and magazine article authors.
- 3-) Use last copy as your order form for ordering the cursor scroll program.

Scroll Order Information

Circle per you computer:

PET 2001 -8K, -16K, -32K (3.0 Roms, 4.0 Roms, or Original Roms)
PET 4001 -8K, -16K, -32K (4.0 Roms) (9-inch or 12-inch screen)
CBM 8032 (80 column PET)
VIC (NOTE: VIC and Original Rom version available Nov. 1981.)

Price: \$6.00 on cassette, \$9.00 on diskette
(Postpaid in U.S. and Canada - Add \$5 for overseas airmail)

Name: _____

Address: _____

City/State/Zip: _____

Would you like to see other offers like this: YES NO

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Send my order to:

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properly fill your order:

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Circle one or more for storage device

PET 2001 8K, 16K, or 32K
PET 2001/4.0 roms 8K, 16K, or 32K
PET 8032 80 column

Cassette
PET 2040 or 4040 disk drive
PET 8050 disk drive

APPLE][16K, 32K, or 48K

APPLE Disk II or Cassette
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ATARI 400 or 800 8K, 16K, 32K, 40K, 48K ATARI Disk or Cassette

Overseas orders must include enough postage for air mail shipment
(Approximately \$12.00 for most software, \$20.00 for Tiny-C Manual.)

"Support of this sort is often lacking amongst software vendors." ----
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"After dealing with a number of software firms, it is a great pleasure to deal with someone who is willing to work with his users instead of telling them they are on their own." ---- User at Helix Data Systems

"I must admit it's one of the few software products really worth its price." ---- User at Softwarevervund, West Germany

"I complement you and your associates on the general excellence of the software." ---- User in Maryland

"I want to express my greatest admiration for your program. In every way, in every detail attention has been paid to the needs and desires of the user of the program. Commands are simple, straightforward, easy-to-use." ---- User at Motorola Inc.

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